DOCUMENT RESUME

ED 315 419 SP 032 081

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TITLE	Policy Implications Drawn from a Study of Teacher Supply and Demand in Nebraska.
INSTITUTION	Nebraska Univ., Lincoln. Bureau of Educational Research and Field Services.
PUB DATE	Mar 88
NOTE	17p.; For the basic report, see SP 032 080.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Class Size; *Educational Quality; Elementary Secondary Education; Enrollment Trends; Equal Education; Faculty Mobility; Family Characteristics; Gifted; *Policy Formation; *State Action; Teacher Certification; Teacher Education; Teacher Recruitment; Teacher Salaries; *Teacher Student Ratio; *Teacher Supply and Demand
IDENTIFIERS	*Nebraska

ABSTRACT

This summary outline interprets the Nebraska Teacher Supply and Demand Study for its impact on educational policy. A listing is presented of factors revealed in the study of which some are controlled by policy decisions and some result from external forces impacting policy. The following factors are discussed: (1) student enrollment; (2) pupil teacher ratios; (3) more women in the work force creating a need for more child care; (4) increased family disorganization and economic deprivation; (5) educational equity and opportunity; (6) opportunities for the highly gifted; (7) class size; (8) educational finance; (9) teacher attrition by retirement; (10) teacher attrition before retirement; (11) teacher education and certification; (12) reserve teacher pool; (13) teacher salaries; (14) educational quality; and (15) early teacher recruitment. It is noted that the Teacher Supply and Demand Study should be routinely up-dated. (JD)

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March 1988

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SP032081

POLICY IMPLICATIONS DRAWN FROM A STUDY OF TEACHER SUPPLY AND DEMAND IN NEBRASKA

March 1988

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POLICY IMPLICATIONS DRAWN FROM A STUDY OF TEACHER SUPPLY AND DEMAND IN NEBRASKA

The critical test of the value of a set of data depends on its interpretation. This summary outline interprets the Nebraska Teacher Supply and Demand Study for its impact on educational policy and also discusses related issues.

I. The fact that the important question of teacher supply and demand had no definitive answer except through a special study and the fact that any answer is in a continuous state of flux dictate that the impetus of this effort trigger continuing study.

The policy implication is that some agency, logically the State Department of Education, be officially charged with routine up-dates of this report. Authority to demand that data be reported in the format best suited to accomplish the task must accompany the responsibility. A number of relatively simple data collection changes will facilitate the continuing study. For example:

--- Data on teachers are now lumped together with information for all members of the Nebraska State Retirement System. If this information

for teachers were separated, a precise age distribution of current teachers in public schools would be available as well as important data on yearly attrition rates.

--- Age information could be required on all personnel reports to the State Department of Education now made annually by school districts.

--- If an agency were authorized to use social security numbers to track individuals across several existing data bases, solid statistics could be obtained without violating privacy.

II. Obviously, it is possible to have an adequate teacher supply overall while still having shortages or surpluses in particular grade ranges, teaching subject fields or geographic areas. Demographics in Nebraska are not geographically uniform with regard to population growth or decline. Nebraska school districts are characterized by a wide range of differences in size, wealth and program. Generalization from the aggregate data of this study must therefore be made with some caution.

The policy implication is that the study must not only routinely be replicated, but that its methodology also be

expanded so that separate interpretations of its disaggregated elements can be validly drawn.

III. The study clearly identifies the assumptions made and the factors held constant in arriving at its conclusion. It is equally clear, however, that many of the factors do change and that continuous examination of teacher supply and demand must monitor such trends. The listing which follows discuss those factors, some of which are controlled by policy decisions and others which result from external forces impacting policy.

A. Student Enrollment

The accepted techniques for projecting future school enrollments involving application of cohort survival ratios depend heavily on the assumption that past demographic patterns will continue. For that reason it is important to monitor factors influencing enrollment to detect early signs of trend reversals. Policy makers must reconcile school enrollment projections with such related factors as social trends in family formation and child bearing statistics, economic conditions affecting migration and other overall demographic data.

Predictions that some areas of the state will grow while others will lose population suggest that student

population figures may not always bear a directly proportional relationship to teacher demand. Growth will occur where schools are already larger by comparison and loss will occur where schools are already smaller. Although it is possible that the greater capability of larger schools to absorb additional students without adding teachers will cancel the inability of smaller schools to reduce staff proportionate to enrollment loss, such comparisons need to be tracked rather than assumed.

Student drop out rates, currently stable and relatively low in Nebraska, affect enrollment projections. Changes in school programs, economic conditions and family circumstances affect drop out rates. The net migration from rural to urban settings could be a factor to the extent that urban drop out rates tend to be higher.

Numbers of students being educated at home were not considered large enough to merit special attention in this study. Nevertheless, the current upward trend in this movement and the possibility of those students returning to regular classrooms indicate a need to keep track of these figures.

B. Pupil teacher ratios.

1. School District Reorganization.

Because pupil teacher ratios are lower in smaller district, conventional wisdom suggests that school consolidation will reduce teacher demand. However, history and political realities also suggest that school district reorganization in Nebraska will be gradual and incremental rather than sudden or massive. The before and after staffing figures related to any consolidation are readily available and should be tracked to establish a data base useful in predicting impact of legislation or other policy changes that hasten or retard consolidation.

2. Program changes.

Expansion of educational programs available to youth tend to lower overall pupil teacher ratios thus increasing demand for teacher. Recent legislation requiring more services for handicapped children is a prime example.

Pressure for better quality education and response to social changes are likely to continue the trend of expanding school services.

a. The changing role of women in the work force is creating need for more child care. This need, coupled with research results

showing the importance of early childhood education, builds pressure for school services beyond the age group now served. Legislation to require such added service and/or funding to enable it are policy actions which will impact teacher demand.

b. Increased family disorganization and economic deprivation put more youth at risk with regard to school success. The usual policy response to these conditions is the creation of additional special programs tending to reduce pupil teacher ratios.

c. The combined quest for educational equity and high quality opportunity force the retention or expansion of instruction in advanced elective subjects (foreign language, higher mathematics, etc.) even in small schools were the enrollment is insufficient to maintain normal class size. Legislation or public policy which mandates specific curricular requirements therefore impacts student teacher ratios.

d. Recent renewed interest in special opportunities for highly gifted or talented students may spawn additional new programs.

e. Obviously, direct legislation to limit class size, often promoted as a qualitative improvement, will impact student teacher ratios. It must be recognized that mandates limiting class size come from sources other than state legislation. There is pressure from teacher associations to include class size limits in negotiated contracts, parent groups frequently support the concept, and policy commitments by local Boards of Education put caps on class size. Although policy decisions in this regard are important to the supply demand question, almost nowhere in educational research is there a more debatable, emotional or misunderstood issue than optimal class size.

f. Beyond the question of teacher supply and demand, the student teacher ratio has enormous ramifications for financing education. Because of the labor intensive nature of the educational enterprise, the pupil teacher ratio is a key figure in any

school budget, a fact frequently under estimated by many policy makers.

Not all program changes are necessarily expansionist. Concentration on college preparatory subjects, trends toward a more common core curriculum, and "back to the basics" movements reduce the range of electives for students while at the same time reducing the need for instruction in vocational education, fine or practical arts and instructional areas which tend to have lower pupil teacher ratios. In the policy arena, categorical funding and/or public pressure to encourage one type of program or to dismantle support for an existing thrust influences pupil teacher ratios.

New uses of technology to deliver instruction, particularly those aimed at overcoming problems of sparse population and distance in rural areas, may change pupil teacher ratios. While policy commitments to such endeavors may, on the one hand, reduce pupil teacher ratios, they may also decrease the rate of school consolidation.

C. Teacher Supply.

1. Attrition by retirement.

Gross attrition figures from year to year establish averages and trends but do not fully reflect reasons for retirement or demographic bulges which affect changes in trends. With more exact age distribution data, attrition by retirement could be more accurately forecast. To the extent the present age distribution of teachers is skewed or has yearly aberrations, attrition in any given year may differ from the average or from the projected trend.

However, retirement is not solely a function of age. Recent policy action of the Federal government regarding mandatory retirement age changed many local policies or practices that long depended on a fixed retirement age. Early retirement incentives and/or legislation providing more generous early retirement benefits affect individual teacher retirement decisions.

Retirement decisions are also made or changed on the basis of general economic conditions such as inflation rates or ont he basis of working conditions, such as teaching load.

2. Attrition before retirement.

The fact that attrition rates for newly certificated teachers are higher than for more experienced teachers and that Nebraska's attrition rates are higher than the national average indicate either a younger teacher age distribution in Nebraska or a significantly higher attrition for reasons other than retirement. In the absence of data to demonstrate a younger age distribution, the reasons for teachers leaving are of significance for policy makers. While it may simply be a function of the apparent over-supply, it also is most certainly affected by salary levels and working conditions in comparison to other employment in Nebraska or to other teaching opportunities outside Nebraska. A qualitative concern may be attached if it also is assumed that the best and the brightest are those who seek greater opportunities elsewhere.

3. Projecting Supply.

A number of recent, and several imminent policy changes, have strong implications for impacting the number of individuals who will become credentialed to teach. Legislation that

attempts to improve quality by imposing more stringent entry level requirements and policy decisions at teacher training institutions to increase the rigor of training are part and parcel of the current reform movement. Activity on the national level is characterized by the Holmes Report and the Carnegie effort to insure a fifth year of preparation prior to certification. Concerns for whether an individual is actually teaching in the field of strongest preparation have caused a tightening of certification requirements with regard to multiple endorsements for one individual to teach several different subjects. In addition to affecting supply, such changes also place serious hardships on small schools in staffing expanded programs.

It cannot be automatically assumed that more stringent certification requirements will reduce supply. Some insist that such measures add dignity and appeal to the profession and are reinforced, in the general reform movement, with better salaries and working conditions. Indeed, recent national reports cite an increase in enrollments in teacher training institutions. Such gross national data must be interpreted with caution, however, because the actual number of

teachers finally certified is the more meaningful statistic, and the Nebraska study shows this figure in a downward trend.

External factors, unrelated to preparation programs, may have an equally strong impact on supply. Economic factors such as tight labor markets with low unemployment rates and comparatively low pay for teachers will affect individual decisions. Moreover, the growing tendency for business and industry to mount ambitious training programs of their own provides another avenue of employment for those trained to teach.

Nebraska policy makers may need to be particularly sensitive to the potential double impact on supply if requirements for entry are raised while comparative salary levels remain low, especially with reference to salary levels for teachers outside Nebraska. For example, present policy has increased the difficulty of obtaining a credential at the same time that economic conditions have reduced Nebraska teacher starting salaries in comparison to some neighboring states. The supply demand study gives credence to this scenario to the extent that the supply of teachers prepared in other states trends downward.

4. The reserve pool.

Softness of data about the reserve pool has several implications for policy makers. On the one hand, because the data are soft, they are amenable to a wider range or more subjective set of interpretations thus providing the temptation to fit the data to a preconceived agenda. On the other hand, it is clear that procedures are needed to insure more dependable information about the reserve pool.

Policy changes requiring more frequent renewal of certificates and procedures that gather information at the time of renewal could build a data base for more accurate information.

IV. Quality Considerations.

Policy makers should be aware that this study deals only with the quantitative question of teacher supply and demand. It is obvious, however, that shortage of supply may contribute to lower quality while ample supply provides school districts with the opportunity to be selective in hiring which presumably elevates quality. If districts are forced to dip into whatever reserve pool exists to staff classrooms, chances are high that people who have a limited commitment to the profession or who have previously been denied teaching assignments will staff our schools.

From a policy point of view, measures that insure an adequate supply of high quality teachers are important to maintaining educational excellence.

V. Salary Schedules.

Frequent references to the effects of salary levels on teacher supply and demand have already been made. An additional observation is important from a policy point of view. Present salary arrangements for teachers in Nebraska reward solely on the basis of training and experience and therefore cannot respond to the differential needs for teachers with respect to subject matter or grade level. In other words, current salary practice reduces school districts ability to adjust to the reality of teacher shortage in some areas and surpluses in others.

VI. Finally, it is readily apparent that publicity about teacher supply and demand does influence career choices of youth. Also, the impact of initial career choices of high school graduates on eventual teacher supply is important because of the four to five year lead time between a career decision and the availability to teach. Therefore, it behooves policy makers not only to keep abreast of reliable data on supply and demand but also to insure that this information is publicized and made routinely available.